

AMENDMENTS TO THE DRAWINGS

The attached "Replacement Sheet" of drawings includes changes to Figure 2. The attached "Replacement Sheets," which includes Figures 1 and 2, replaces the original sheet 1 of 6 including Figures 1 and 2.

Attachment: Replacement Sheet

REMARKS

Claims 1-16 are now pending in the application. Minor amendments have been made to the specification, drawings, and claims to simply overcome the objections to the specification and rejections of the claims under 35 U.S.C. § 112. Claims 1-12 have been amended by this Amendment. New claims 17-21 have been added by this amendment.

The Examiner is respectfully requested to enter the added claims and to reconsider and withdraw the objections and rejections in view of the amendments and remarks contained herein.

DRAWINGS

The drawings stand objected to for certain informalities. Applicant has attached replacement sheet one of six that includes a revised drawing Fig. 2 for the Examiner's approval. In the attached "Replacement Sheet," the reference to the chain in Fig. 2 has been amended consistent with the amendment to the specification to change the reference number for the chain from 30 to 31.

SPECIFICATION

The specification stands objected to for certain informalities. As noted above, Applicant has amended the specification according to the Examiner's suggestions. Therefore, reconsideration and withdrawal of this objection are respectfully requested.

REJECTION UNDER 35 U.S.C. § 112

Claims 2-11 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter that Applicant regards as the invention.

First, claims 2-11 are rejected due to an insufficient antecedent basis for the preamble reference to claim 1. As an initial matter, Applicant traverses the statement in the Office action with regard to this rejection as the preamble of these dependent claims clearly recite dependency, whether direct or indirect, from independent claim 1, which recites a multi-path torque coupling. Additionally, while Applicant understands that the preamble reference to claim 1 is not traditional, Applicant traverses the statement in the Office action that the preambles to claims 2-11 are "limitations" as the preamble to a claim is not an element or limitation of the claim. These preambles clearly refers to claim 1, regardless of how that reference is labeled or referred.

This being said, in order to be responsive to the Office action and to move this matter forward, Applicant has amended the preamble of claims 2-11 to recite dependency reference in the preamble to be “the torque coupling of claim 1”, rather than “the combination according to claim 1.”

Claim 3 is rejected due to a potential uncertainty as to whether the second recite to “a piston pump” in the claim refers to the first recited of a piston pump in the claim. Applicant has amended claim 3 to clarify the recitations of claim 3 in this regard.

Claim 4 is rejected due to an insufficient antecedent basis for the recited “said planetary elements”. Applicant has amended claim 4 to recite a single “said planetary element” as recited in the line immediately preceding this recitation. Applicant notes generally that when describing elements or features and/or embodiments thereof, the articles "a", "an", "the", and "said" are intended to mean that there are one or more of the elements or feature, just as the terms "comprising", "including", and "having" are intended to be inclusive and mean that there may be additional elements or features beyond those specifically described. As such, any recitation of a single component or element in the specification and in the claims, includes one or more such components or elements, and that the claims should not be interpreted to be so limiting unless otherwise specifically limited by the claim recitations.

REJECTIONS UNDER 35 U.S.C. § 102

Claims 1-5 and 9-16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Pat. No. 5,083,986, to Teraoka et al (hereinafter Teraoka). This rejection is respectfully traversed.

The Office action relies on Teraoka generally and in particular for identifying various claim recitations. In response, the Applicant will first address independent claims 1, 12, and 16.

Amended claim 1 recites, among other elements, a multi-path torque coupling. The multipath coupling is provided by two different assemblies of components, one including the clutch and one that does not include the clutch. This is different than disclosed by Teraoka as the only torque coupling path of Teraoka is through the clutch. In Teraoka, torque transfer between the input drive and the output drive is provided through the main clutch that is activated by the pilot clutch and a pilot clutch activation mechanism. As taught by Teraoka, no torque is transferred from the input to the output unless the pilot clutch engages the main clutch. As noted

in Teraoka, “when the electromagnet 1063 is deenergized, since the pilot clutch 1061 is disengaged or released, the main clutch 1045 is also kept disengaged or released, no power is transmitted from the first rotary member 1029 [input shaft] to the second rotary member 1033 [output shaft], or vice versa.” Teraoka, col. 5, lines 16-22.

In contrast to the teachings of Teraoka, claim 1 recites a first torque path through the torque coupling (between the input and output) is defined as the input shaft, said wet-plate clutch, said second element, said third element, said fourth element, and output shaft. A second torque path through the torque coupling is defined by the input shaft, first element, said third element, and said fourth element, and output shaft (emphasis added). As such, claim 1 provides for the transfer of torque between the input and output shafts in two manners, the first torque path is through the clutch, along with the second, third and fourth elements, whereas the second torque path is through the first, third and fourth elements, not including the clutch.

Teraoka does not disclose two torque paths through the torque coupling between the input shaft and the output shaft. Also, Teraoka does not disclose a torque path other than through the clutch. Claim 1 recites that torque is transferred by the torque coupling from the input shaft to the output shaft through the first, third and fourth elements. As one exemplary embodiment as disclosed in the specification, the first element can be a ring gear, the third element can be a planet gear and the fourth element can be a carrier that is coupled to the output shaft. This does not include the clutch and also does not include the second element, which is identified by example as being a sun gear. This is different than disclosed by Teraoka as both the main clutch 147 and the sun gear 109 are required to transfer torque in the coupling of Teraoka.

As Teraoka only teaches a single torque path between the input and output shafts, and also does not provide a torque path through the torque coupling that is other than through the clutch, the rejections to claim 1 should be withdrawn and claim 1 should be allowed. Additionally, as claims 2-11 depend from claim 1, the rejections to these claims should also be withdrawn and these claim place in allowance, at least due to their dependency from allowable claim 1.

However, this being said claim 1 includes other recitations that are also not disclosed by Teraoka. As a second matter, claim 1 recites a pumping mechanism configured to engage said first and second clutch members of said wet-plate clutch responsive to said first and second

clutch members rotating at different angular velocities. As recited here, the pumping mechanism engages the clutch for transferring torque through the first torque path as a function of or otherwise responsive to the two clutch members rotating at different angular velocities. In other words, the clutch engages and transfers torque along the first torque path within the torque coupling responsive to the difference in the angular velocities of the two clutch members.

This is not taught or disclosed by Teraoka. Teraoka discloses a pilot clutch that is controlled by a solenoid or electromagnet 1063. As disclosed in Teraoka, the user or a vehicle control system can engage or activate the electromagnet that in turn engages the pilot clutch. The pilot clutch then engages the main clutch through a set of cams 79 and cam members 78. While it is possible for the two clutch members (of the same clutch or of the pilot and main clutches) of Teraoka to rotate at different angular velocities, the engagement of the clutch and therefore the transfer of torque through the first torque path is not determined by, or is a function of, differences in the angular velocities of the two complementary components of the clutch.

Rather, Teraoka only teaches control of the pilot and main clutches in response to an external excitation of the electromagnet or other excitation source. It is noted in Teraoka that differences in the driving resistances between the front and rear wheels (not input and output of a single drive train) can be utilized for differentially distributing torque, “according to the driving resistance difference.” (for example see Teraoka, col. 6, line 67 to col. 7, line 7). However, differences in resistance between two drive wheels is different than differences in angular velocities between two portions of a clutch member.

It should also be noted that the Office action relies on a reference in Fig. 6 as being a “pumping mechanism.” However, what is referred to is a piston 359 and cylinder 361 that utilizes compressed air (as discussed in Teraoka, col. 13, lines 35-55), to move the piston to engage the pilot clutch by moving the clutch drum. This in turn locks the main clutch in an engaged position that then locks the planetary carrier and the sun gear. When the piston is released, the return spring 351 returns a push member 353. As such, this piston is operative in response to compressed air that is provided from an external control for controlling the pilot clutch similar to the other embodiments taught by Teraoka that utilizes an electrical signal to activate the electromagnet. As such, Fig. 6 of Teraoka does not disclose a pumping mechanism that engages the clutch members of the main and only clutch in response to the two clutch members rotating at different angular velocities as recited by claim 1.

As Teraoka does not teach or disclose a pumping mechanism that engages the clutch members responsive to the two clutch members rotating at different angular velocities, the rejection to claim 1 should also be withdrawn.

Claim 12 recites, among other elements, a clutch having first and second clutch members capable of rotating at different angular velocities wherein the clutch is configured for transferring torque between said first and second clutch members when said first and second clutch members rotate at different angular velocities. Claim 12 further recites a locking mechanism configured to maximize torque transfer between said input shaft and said output shaft.

As noted above, Teraoka does not teach or disclose a clutch that is capable of transferring torque between clutch members responsive the first and second clutch members rotating at different angular velocities. Teraoka teaches a main clutch that is controlled by a pilot clutch that receive activation from an electromagnet or air piston based on a manual or automatic external input from the torque coupling. Teraoka does not include any disclosure that the clutch and/or torque transfer of the clutch is a function of or operates when there is a difference between the angular velocities of the two sides of the clutch.

Additionally, Teraoka does not teach or disclose a locking mechanism configured to maximize torque transfer between said input shaft and said output shaft. The Office action relies on the pilot clutch as the means for such locking. However, the pilot clutch cannot lock the transfer as described in Teraoka, it is only designed to activate the main clutch, in which torque transfer between the input and output is provided. The main clutch in combination with the pilot clutch are not disclosed as providing a maximize torque transfer.

For these reasons, the rejection to claim 12 should be withdrawn.

Referring now to claim 16, the claim recites a torque coupling for a vehicle provides for apportioning torque between the primary and secondary wheels of the vehicle and includes a clutch, a locking mechanism, and a planetary set that are connected such that a locking mechanical path and a clutch path exist through which torque is transferred between the power unit and the secondary wheels. The amount of torque transferred through the clutch path in relation to the amount transferred through the locking mechanical path is variable as a function

of the clutch. The apportionment of torque between the primary and secondary wheels is controlled by the clutch and the locking mechanism.

As recited, claim 16 recites two torque transfer paths through the torque coupling. This is stated since it provides for the amount of torque transferred through the clutch path is in relation to the amount of torque through the locking mechanical path being variable as a function of the clutch. As discussed in detail above, Teraoka does not disclose a torque coupling that has or is capable of having two torque transfer paths. It only teaches a single path through the main clutch that is activated by the pilot clutch.

Also, Teraoka does not disclose a variability of the torque through the clutch path and a locking mechanical path as a function of the clutch. There is no such teaching in Teraoka. Teraoka simply teaches controlling the torque transfer through the main clutch by controlling the pilot clutch with a pilot clutch activation mechanism, such as an electromagnet or air piston.

Additionally, Teraoka does not disclose a torque coupling that apportions the amount of torque provided to the primary and secondary wheels as a function of the clutch and a mechanical locking mechanism as recited by claim 16.

For these reasons, the rejection to claim 16 should be withdrawn.

As noted, dependent claims 2-11 depend either directly or indirectly from claim 1, claims 13-15 depend from claim 12, and claim 17 depends from claim 16. Each of these dependent claims is also allowable at least due to the same reasons as the claims from which they depend. Additionally, each is also allowable in its own right in view of Teraoka. These will now be addressed.

Claim 2 recites that the pumping mechanism of claim 1 is a gear pump that includes an external gear coupled to the second clutch member and an internal gear coupled to the input shaft. As noted in claim 1, the pumping mechanism of claim 2 is configured to configured to engage the first and second clutch members of the clutch responsive to said first and second clutch members rotating at different angular velocities. As such, as recited in claim 2, the external gear is coupled to the second clutch member that is also coupled to the second element and the internal gear is coupled to the input shaft that is also coupled to the first clutch member. The external gear attached to the second clutch member and the internal gear coupled to the

output shaft provide the pumping mechanism that is responsive to the differences in the angular velocities to the input shaft (and therefore first clutch member) and the second clutch member. The clutch is thereafter responsive to pumping mechanism to engage its clutch members. This is not taught by Teraoka. Teraoka discloses a pilot clutch activation mechanism that can be an electromagnet or an air piston that receives outside activation that in turn activates the pilot clutch that then activates the main clutch. Neither the pilot clutch or the main clutch of Teraoka are responsive to a pumping mechanism that has an external gear coupled to the second clutch member and an internal gear that is coupled to the input shaft or the first clutch member. Additionally, in Teraoka the activation of the clutch members are not responsive to differences in the angular velocities of the two clutch members.

As such, the rejection to claim 2 should be withdrawn.

Claim 3 recites wherein said pumping mechanism includes an axial cam plate coupled to said second clutch member and a piston pump disposed within a pump housing, said piston pump in operative relationship to said axial cam plate. As noted above, Teraoka does not disclose a pumping mechanism as recited that is responsive to differences in the angular velocities of the two clutch members. The only activation member disclosed by Teraoka is one that receives an outside command, such as an electromagnet charge or air pressure that in turn activates the pilot clutch that, then activates the main clutch through a cam ring and cam balls. However, the cam ring and balls and the piston of Teraoka are not configurable to be responsive to differences in the angular velocities of the two clutch members of the main or pilot clutches. Rather, in Teraoka the cam plate and balls are responsive to the pilot clutch to aid in the activation or engagement of the main clutch. As Teraoka does not disclose a cam plate as a part of the pumping mechanism in conjunction with the piston pump that is responsive to the differences in angular velocities of any components or elements, the rejection to claim 2 should be withdrawn.

Claim 4 further recites that the first element is a ring element located around said common axis, the second element is a sun element which rotates about said common axis, the third element is a carrier element which rotates about said common axis; and the fourth element is a planetary element located between, and engaged with the sun and ring elements, and disposed on the carrier element. While Applicant acknowledges that Teraoka has each of these

planetary gearing elements of claim 4, claim 4 must be read in conjunction with claim 1 from which it depends. As noted above, these planetary gearing elements are configured to provide two different torque transfer paths through the torque coupling. The clutch, sun gear, planet gear, and the carrier provide a first transfer path. The ring gear, the planet gear, and the carrier provide the second transfer path. Teraoka does not disclose in Fig. 6 or otherwise these two coupling arrangements such that torque can be transferred between the input and output shafts by two paths. In fact, the disclosure of Teraoka cannot provide these combinations. As such, the rejection to claim 4 should be withdrawn.

Claim 5 further recites a locking mechanism configured to maximize torque transfer between the input shaft and the output shaft. Claims 6-11 recite various assemblies for the locking mechanism of claim 5. The Office action relies on the pilot clutch 347 for providing this locking. However, the pilot clutch 347 of Teraoka is merely the actuator for the main clutch. While it does provide for controlling the torque transfer of the main clutch, it does not provide for maximizing the torque transfer between the input shaft and the output shaft as recited. Additionally, a pilot clutch activation mechanism such as an electromagnet or air piston controls or otherwise activates the pilot clutch. Teraoka teaches that the main clutch provides for the torque transfer and that the pilot clutch only activates and controls the main clutch. See Teraoka throughout. Furthermore, there is no mention or teaching within Teraoka that these can be locked to maximize the torque transfer between the input and output shafts. Teraoka only teaches that the main clutch can be locked by the pilot clutch and/or cam mechanism according to the engagement force of the main clutch to limit the differential motion of the center differential gear. (See Teraoka, col. 10, lines 48-53, and col. 12 lines 4-8.) As Teraoka does not disclose a locking mechanism that is configured to maximize torque transfer between the input and output shafts as recited by claim 5, the rejection to claim 5 should be withdrawn. Additionally, as claims 6-11 depend from claim 5, the rejections to claim 6-11 should also be withdrawn at least due to their dependency from allowable claim 5 and also allowable claim 1.

Claim 9 further recites wherein said locking mechanism is operatively disposed in parallel with said wet-plate clutch, between said first and second elements of said planetary set. Similarly, claims 13 -15 recite similar specific locking mechanisms. As claims 13 - 15 depend

from claim 12, the rejections to claims 13 - 15 should also be withdrawn at least due to the dependency from allowable claim 12.

Additionally, new claims 17 - 21 have also been added with this amendment and are also separately allowable in view of Teraoka.

New claim 17 recites that the pumping mechanism is a hydraulic pump self contained within the torque coupling and configured to increase and decrease hydraulic pressure responsive to an associated increase and decrease in the difference between the angular velocities of the first and second clutch members, wherein the transferred torque of the clutch is responsive to the increased hydraulic pressure of the pumping mechanism. Teraoka does not disclose these features. As such, claim 17 is also allowable.

New claim 18 recites a multi-path torque coupling comprising a wet-plate clutch having first and second clutch members capable of rotating at different angular velocities, said wet-plate clutch configured for transferring torque between said first and second clutch members when engaged, said first clutch member being connected to said input shaft; a pumping mechanism configured to engage said first and second clutch members of said wet-plate clutch responsive to said first and second clutch members rotating at different angular velocities; a planetary set including a ring gear, a sun gear, carrier, and a planet gear, each of which is organized about the common axis of rotation, the ring gear is connected to the first clutch member and to the input shaft, the sun gear is connected to the second clutch member, the carrier is connected to the output shaft, the planet gear is connected between the ring gear and the sun gear and is also connected between the sun gear and the carrier, wherein the clutch, the sun gear, the planet gear and the carrier are configured for providing a first torque path between the input shaft and the output shaft; and wherein the ring gear, the planet gear and the carrier are configured for providing a second torque path between the input shaft and the output shaft. As addressed above with regard to claim 1, Teraoka does not address the two torque paths and the two different paths using different assemblies of the planetary gears as recited by claim 18. Additionally, Teraoka does not include the other features as addressed above with regard to claim 1. As such, claim 18 is also allowable.

New claim 19 recites a locking mechanism configured to maximize torque transfer between said input shaft and said output shaft through selectively bi-passing the first torque path and the clutch. As recited here, the locking mechanism bi-passes the first torque path and the clutch to lock the transfer between the input and output shafts. Teraoka does not teach two paths and does not teach and is not capable of selectively bi-passing the clutch and still provide torque transfer that is maximized between the input and output shafts. As such, claim 19 is allowable.

New claim 20 recites that the locking mechanism is a mechanical coupling of elements selected from the group consisting of the sun gear to the ring gear, the sun gear to the input shaft, the second clutch member to the ring gear, the second clutch member to the input shaft, the carrier to the ring gear, the carrier to the input shaft, the sun gear to the carrier, and the second clutch member to the carrier. None of these various combinations and coupling of elements is disclosed by Teraoka such that a mechanical coupling that selectively bi-passes the clutch and the first torque path creates a second torque path that maximizes the torque transfer of the torque coupling. As such, claim 20 is also allowable.

Finally, new claim 21 recites a multi-path torque coupling comprising means for amplifying an angular velocity of the output shaft, means for providing a clutch control responsive to a difference between the amplified angular velocity of the output shaft and an angular velocity of the input shaft, means for selectively transferring torque between the input shaft and the output shaft responsive to the provided clutch control, and means for mechanically transferring torque between the input shaft and the output shaft independent from the means for selectively transferring. As addressed above, Teraoka does not disclose the means as recited. Teraoka does not disclose a means for amplifying the angular velocity of the output shaft. Also Teraoka does not disclose a clutch control that is responsive to a difference in angular velocities. Teraoka does not disclose mechanically transferring torque between the input and output shafts independent of the clutch as one means for selectively controlling the transfer of torque. As such, claim 21 is also allowable.

REJECTIONS UNDER 35 U.S.C. § 103

Claims 6-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Teraoka in view of U.S. Pat. No. 4,185,723, to Kelbel. This rejection is respectfully traversed.

As noted above, Teraoka does not teach or disclose the recitations of claim 1 as relied upon in the 102 or 103 rejections. As herein incorporated by reference to the above discussion with regard to claim 1 and summarized, Teraoka does disclose a torque path through the torque coupling that does not include the clutch. As such, Teraoka does not disclose two separate torque paths between the input shaft and the output shaft with one being through the clutch and the other being otherwise, e.g., not through the clutch. Additionally, Teraoka does not teach a pumping mechanism and/or clutch that is operable for transferring torque between the two clutch members in only one of the two torque paths that is responsive to the differences in the angular velocities of the two clutch members. Rather, Teraoka discloses a single torque path through the torque coupler that is through the main clutch that is activated by the pilot clutch that is first activated by the electromagnet. As such, Teraoka does not disclose the recitations of claim 1 and therefore does not include the recitations of claims 6-8, as each of these claims include the recitations of claim 1 due to their dependency thereon.

Additionally, Kelbel does disclose the many missing recitations of Teraoka addressed above. Kelbel addresses a selectable two to four wheel drive transfer case that has a single input, and multiple outputs. A first output is directly coupled to the input for providing continuous full time torque transfer. A clutch assembly is selectable for providing a second torque transfer output. The providing of torque to the first output is independent of the second output and the clutch. In Kelbel, the overrunning clutch operates to activate the second torque transfer to the second output responsive to the first output as a frictional parallel relationship between the first output and the second output is provided. This is quite different than recited by claim 1. Kelbel provides two output shafts having the first driving the rear wheels independent of the clutch and the second driving the front wheel through the overrunning clutch. In contrast, claim recites an output shaft wherein the torque coupling provides two torque transfer paths from the input shaft to the output shaft that are aligned on the same axis. This requires only a single input shaft and an output shaft with the clutch providing one torque transfer path and a second that is directly coupled between the input and the output for continuous full time torque transfer without the use of the clutch. Therefore, since the combination of Teraoka and Kelbel, do not disclose each and

every element recited by claim 1 from which claim 5 depends and therefore from claim 5 from which claims 6-8 depend.

Additionally, claims 6-8 depend from claim 5 that recites a locking mechanism configured to maximize torque transfer between the input shaft and the output shaft. As addressed above and incorporated herein by reference, Teraoka does not disclose such a locking mechanism. As such, the rejections to claims 6-8 under 35 USC 103 should also be withdrawn at least due to their dependency from an allowable claim 5.

NONSTATUTORY OBVIOUSNESS-TYPE DOUBLE PATENTING

Claims 1, 4, 12, and 16 stand rejected under nonstatutory obviousness-type double patenting as being unpatentable over various claims of four U.S. Patents. This rejection is respectfully traversed.

The four U.S. Patents referenced in these double patent rejections were issued to Mircea Gradu, the same inventor of the present application. Additionally, all of these patents in issue have been and are currently assigned or otherwise commonly owned by the same entity, The Timken Company.

However, as thoroughly discussed above, Teraoka does not teach or disclose each and every element recited by claims 1, 4, 12, and 16. As such, the reliance on Teraoka in support of these double patenting rejections does not result in obviousness double patenting with the references commonly owned patents.

The Applicant also traverses these double patenting rejections as each and every referenced claim is a dependent claim that incorporates the features and elements of the claims from which they depend. However, the Office action has not identified that the current claims 1, 4, 12, and 16 recite all of the features of the references claims and are obvious double patenting in view of Teraoka. In this regard, claims 1, 4, 12, and 16 stand rejected under nonstatutory obviousness-type double patenting as being unpatentable over each of claim 4 of U.S. Pat. No. 6,755,762; claims 6-8 of U.S. Pat. No. 6,712,730; claims 8 and 15 of U.S. Pat. No. 6,645,108 ; and claims 3, 6, 7, 11, and 19 of U.S. Pat. No. 6,712,728; each in view of Teraoka.

Each of these double patenting referenced claims recites similar structure, but does not recite the same invention, or make obvious a double patenting of the same invention, as recited by each and every element of each and every claim 1, 4, 12, and 16. This comparison of

structure of the various planetary gearing element does not recognize the differences between what is currently being claims and what the references fully claim as dependent claims. For example, the present claim 1 recites, among other features, a pumping mechanism that is configured to engage the clutch members and is responsive the differences in angular velocities of the two clutch members. None of the claims of the relied on references alone or in combination with Teraoka teaches, discloses, or recites such a pumping feature for controlling the main clutch. Similarly, none of the claims of the relied on references alone or in combination with Teraoka teaches, discloses, or recites a locking mechanism for maximizing the torque transfer by the torque coupling. Also, none of the claims of the references alone or in combination with Teraoka teaches, discloses or claims torque coupling having a clutch that is configured for transferring torque when the first and second clutch members rotate at different angular velocities.

As such, the double patenting obviousness rejections of claims 1, 4, 12, and 16 due to the combination of the each of claim 4 of U.S. Pat. No. 6,755,762, claims 6-8 of U.S. Pat. No. 6,712,730, claims 8 and 15 of U.S. Pat. No. 6,645,108, and claims 3, 6, 7, 11, and 19 of U.S. Pat. No. 6,712,728, each in view of Teraoka, should be withdrawn.

CONCLUSION

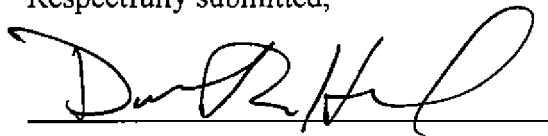
It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned.

Applicant believes that he does not owe any fee in connection with this filing. If, however, Applicant does owe any such fee, the Commissioner is hereby authorized to charge the fee to Deposit Account No. 08-0750. In addition, if there is ever any other fee deficiency or overpayment under 37 C.F.R. §1.16 or 1.17 in connection with this patent application, the Commissioner is hereby authorized to charge such deficiency or overpayment to Deposit Account No. 162201.

Dated: _____

8/30/07

Respectfully submitted,



DAVID L. HOWARD
Reg. No. 41,502
POLSTER LIEDER WOODRUFF & LUCCHESI
Suite 200
12412 Powerscourt Drive
St. Louis, MO 63131
Tel: 314-238-2460
Fax: 314-238-2401